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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,209	10/28/2003	Erik Normann Steen	135272	4504

7590 11/09/2006

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EXAMINER	
JAWORSKI, FRANCIS J	

ART UNIT	PAPER NUMBER
3768	

DATE MAILED: 11/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/695,209	STEEN, ERIK NORMANN	
	Examiner	Art Unit	
	Jaworski Francis J.	3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/28/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 – 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Newman (US6544175, of record) and Savord et al (US5993390). Newman teaches structure and method for alternative ultrasound subvolume imaging modalities including subvolume switching based upon a single frame, col. 6 top portion, utilization of sparse volume line spacing col. 7, and subvolume imaging with uneven refresh to accommodate regions having different robustness of motion, col. 7 top, and includes vertical slicing as an implementation option per col. 8. Data overwrite for the currently updated subvolume produces the appearance of continuously updated display. Savord et al similarly teaches structure and method for single memory 28 implementation of a real-time low resolution subvolume of either vertical slices Fig. 5 or subvolume sectors Fig. 6 where col. 6 lines 27 – 51 suggests that the subvolume scan at low resolution may be built up such that when completed the high resolution cineloop may then be displayed. A greater flexibility to the number of subvolumes and number of ECG-triggered physiologic cycles is suggested. Accordingly the two references together would suggest that a complete and usable realtime image may be produced which, with either per-frame interleave updating or preference

updating to regions of vigorous motion or reduced resolution either in terms of reduced line firing number or reduced number of contiguous subregions interleaved per physiologic cycle which with judicious choice of the number of subregions or subvolumes and the number of physiologic cycles in the image build-up sequence adequately represents a region of greater physiologic motion and near-optimally represents a region in which physiologic motion is less dramatic, alternative to or in a supplementing prelude to non-realtime cineloop display.

[To a certain extent the rejection above is entertaining that Newman may be more broadly enetertained in the context of the art than as characterized in the specification (spec para [0006] should be corrected as Philips is the assignee not the inventor) since for example Newman and Savord et al would suggest that as few as two subvolumes might be displayed at low resolution or less than a full volume, or the subvolumes themselves might be at the level of a single planar frame such that the first image data (visually and or contiguously) joined to the second image data and visually persisting as a composited display would result.]

Any inquiry concerning this communication should be directed to Jaworski Francis J. at telephone number 571-272-4738.

FJJ:fjj

11-06-06

Francis J. Jaworski
Primary Examiner